

FIG. 1

FIG. 2

FIG. 3

FIG. 4

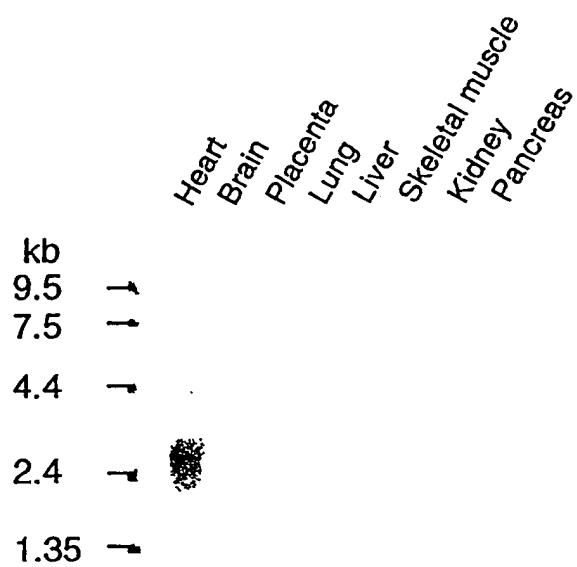


FIG. 4



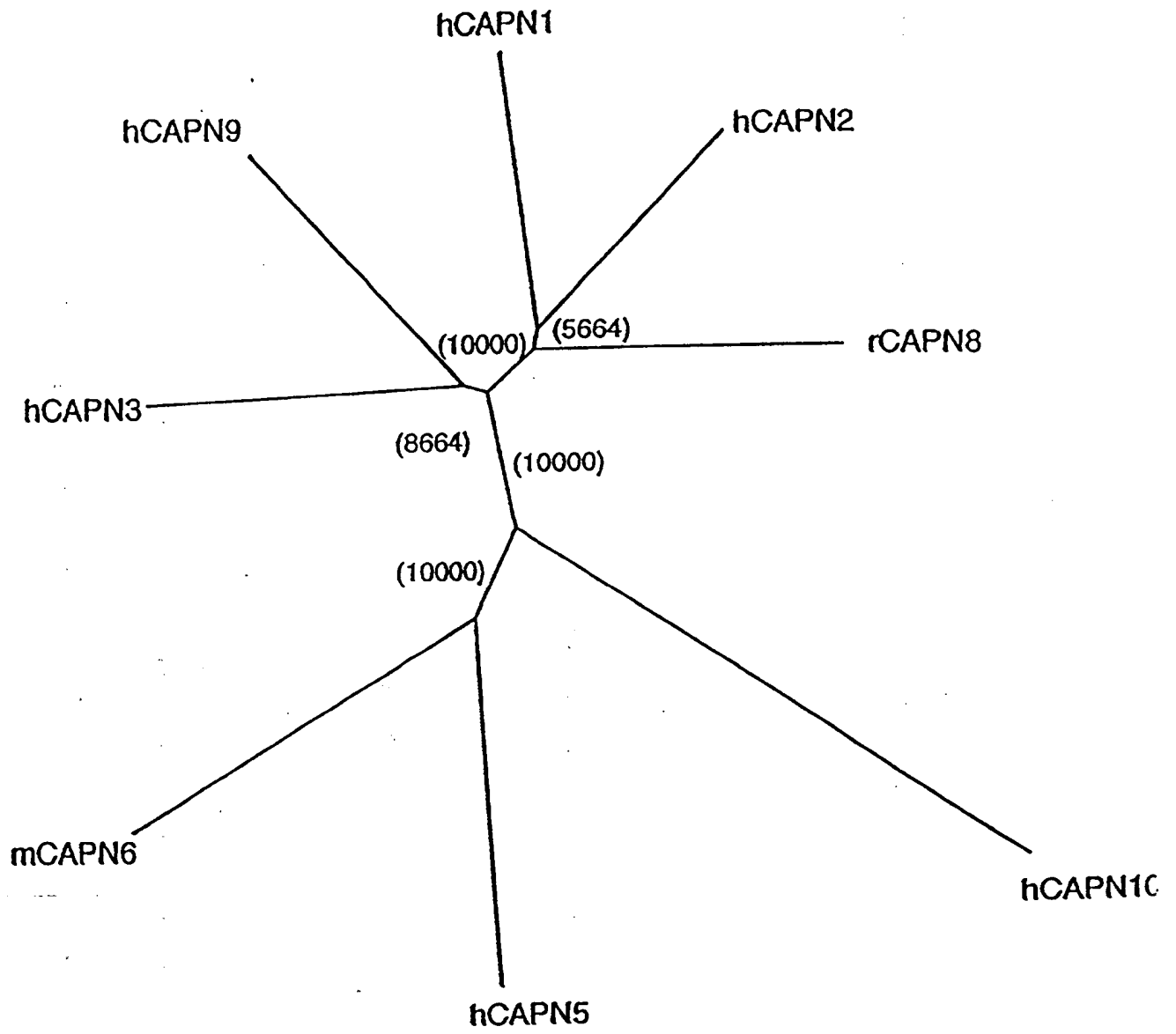


FIG. 6

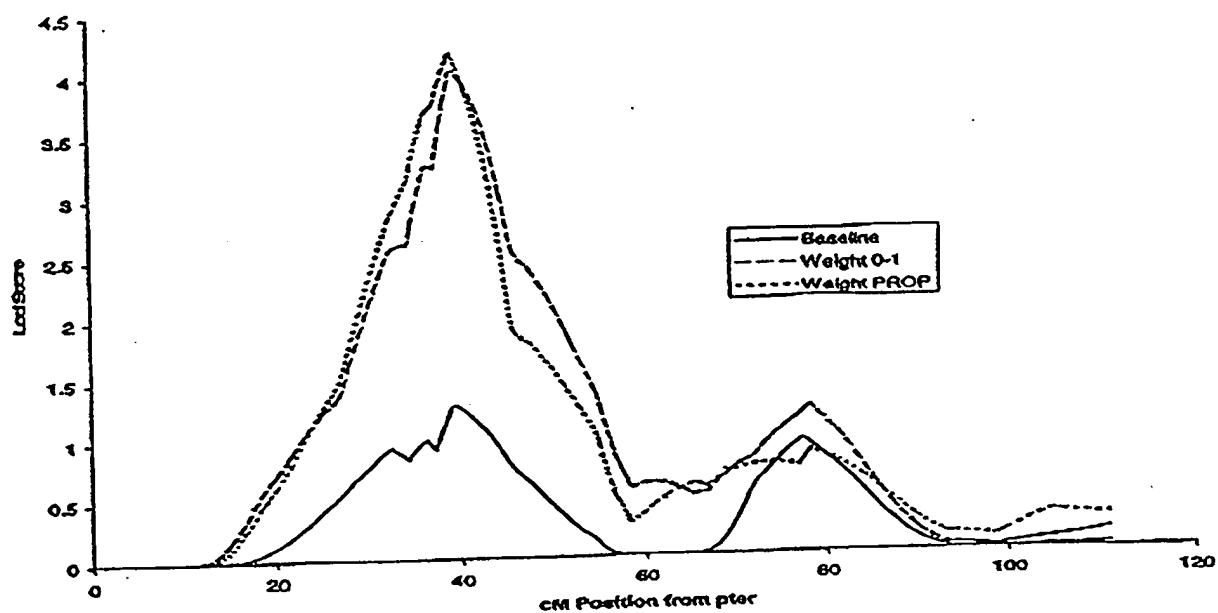


FIG. 7A

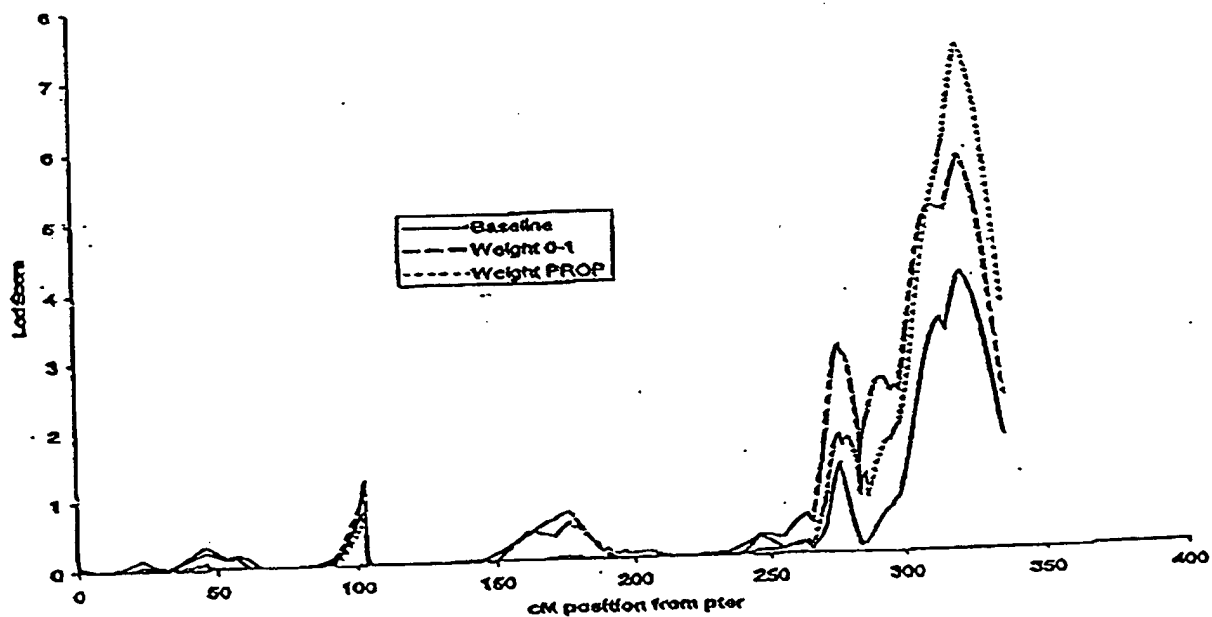


FIG. 7B

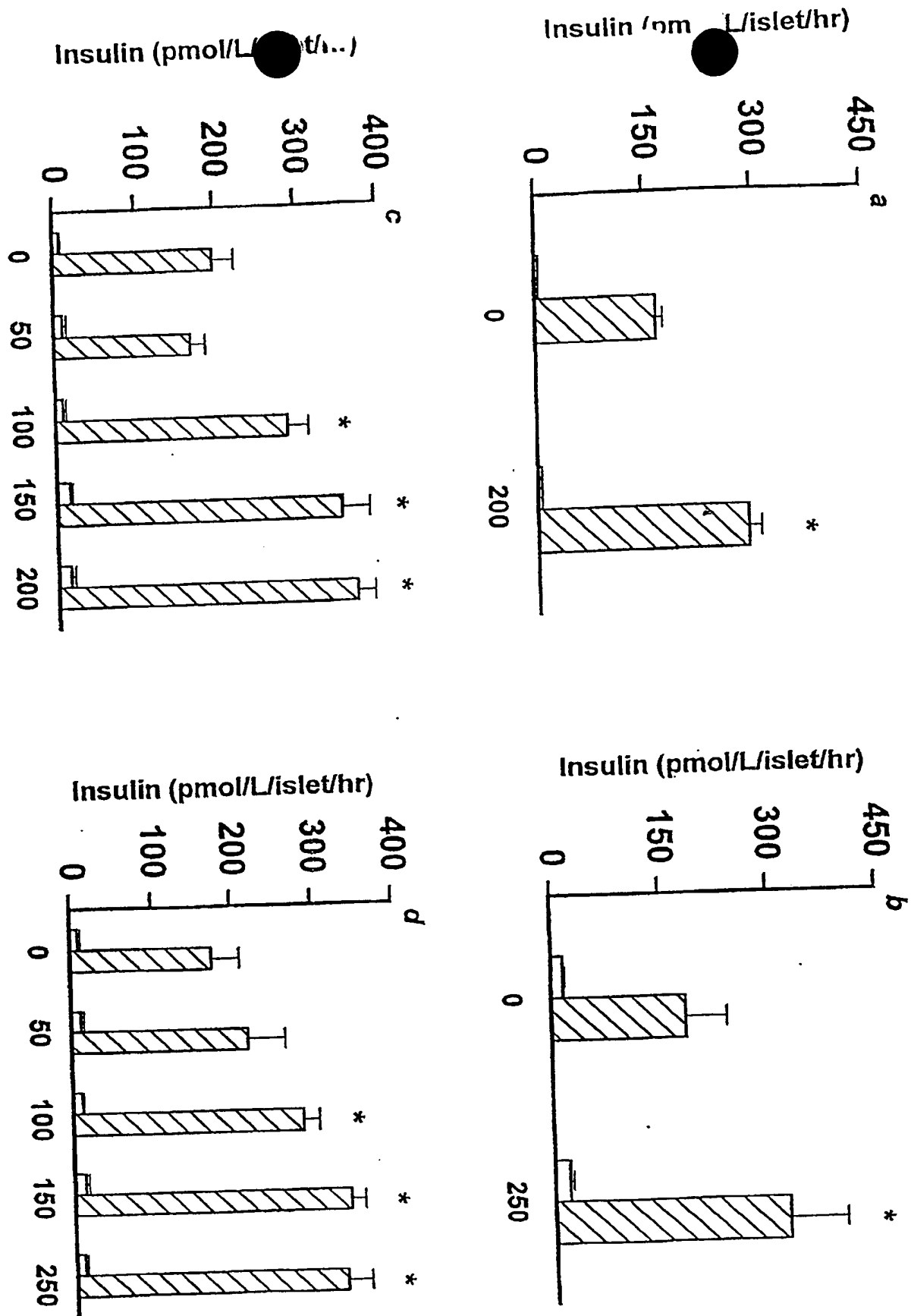


FIG. 8



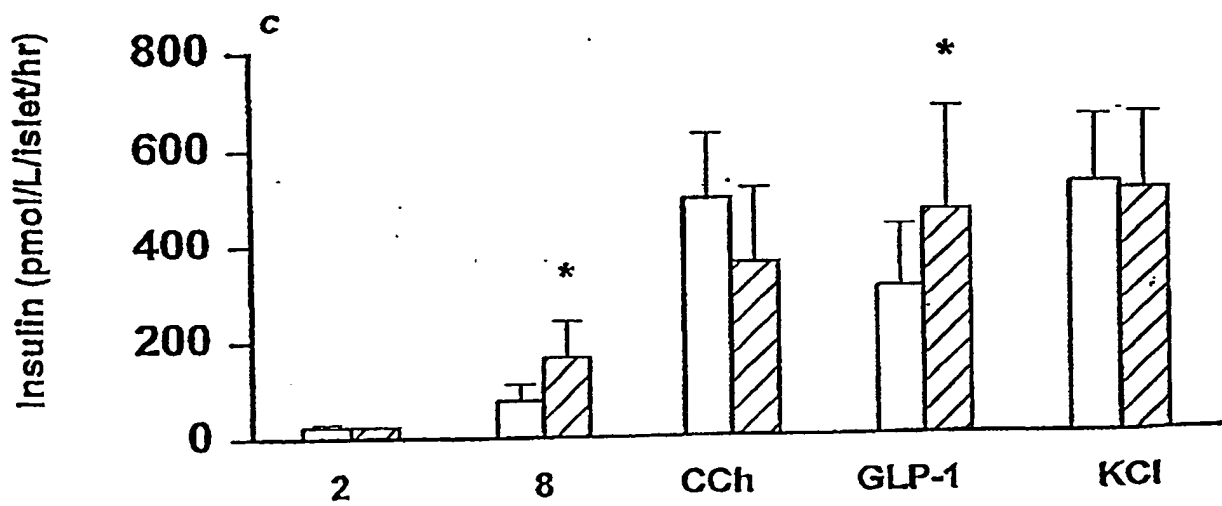
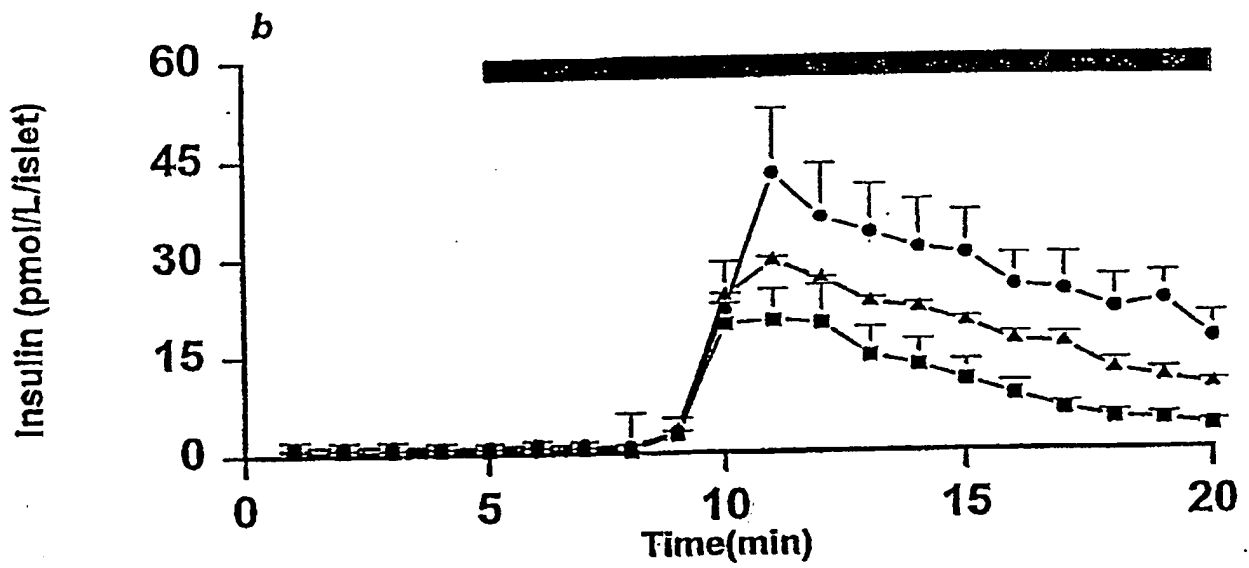
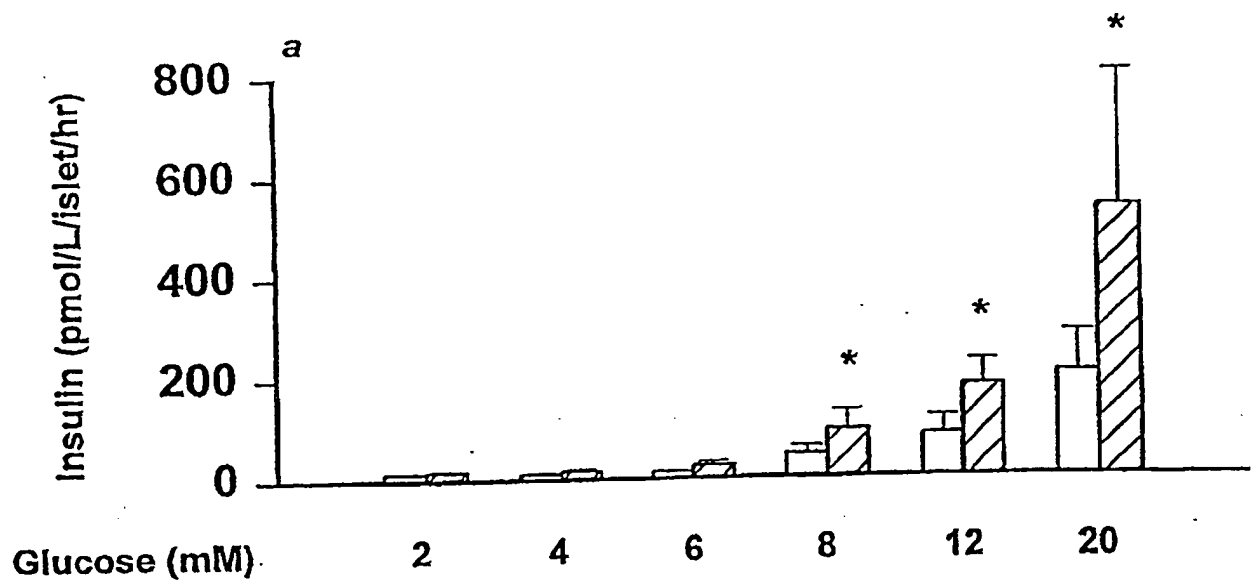


FIG. 9

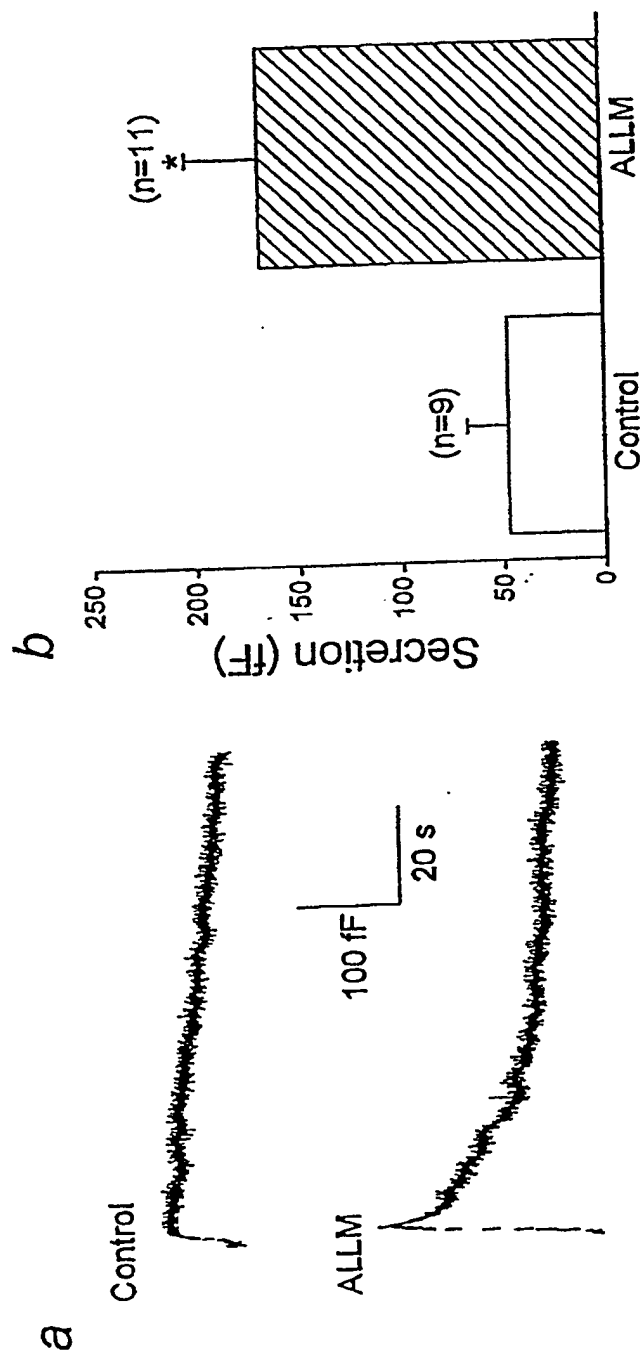


FIG. 10

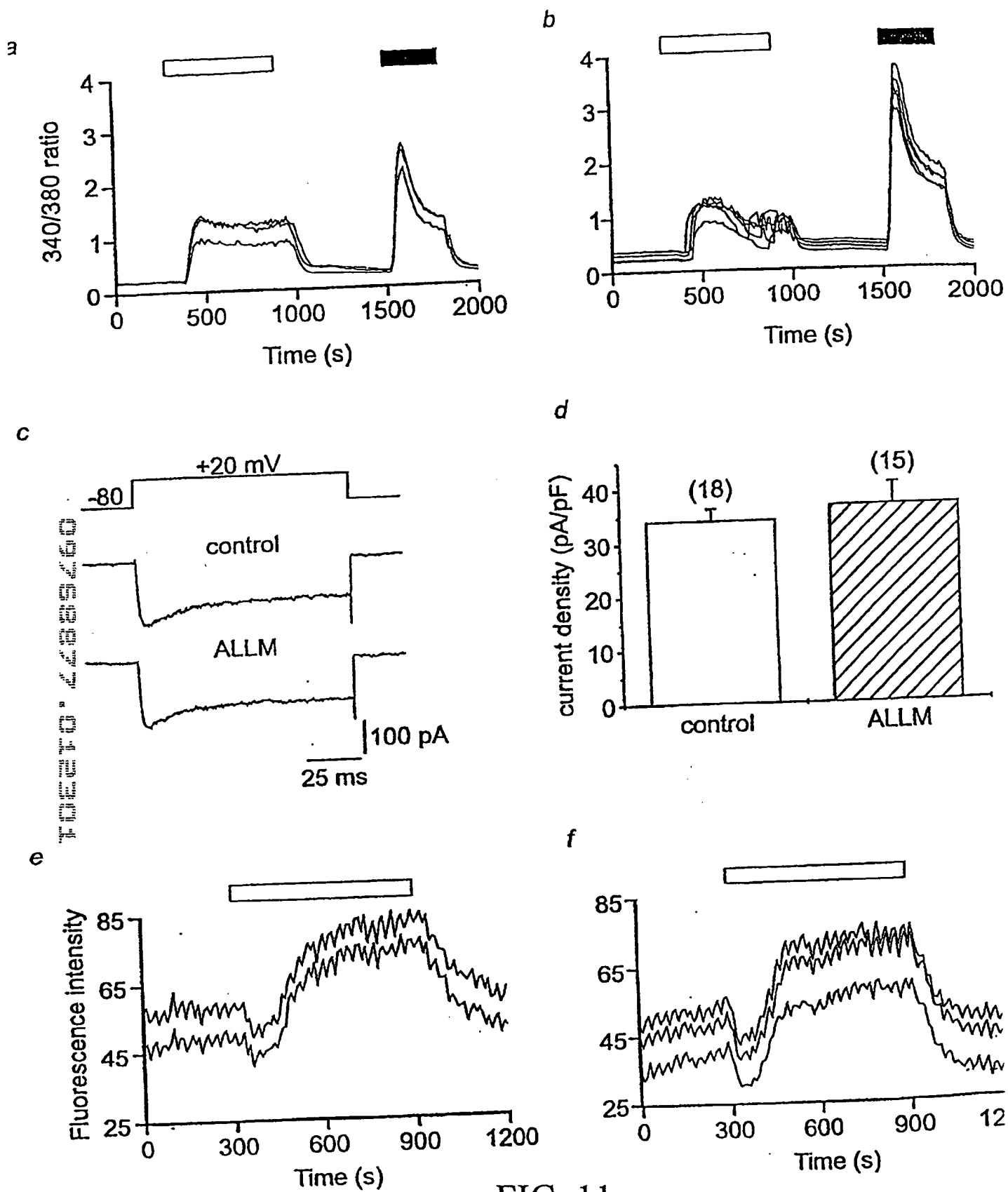


FIG. 11

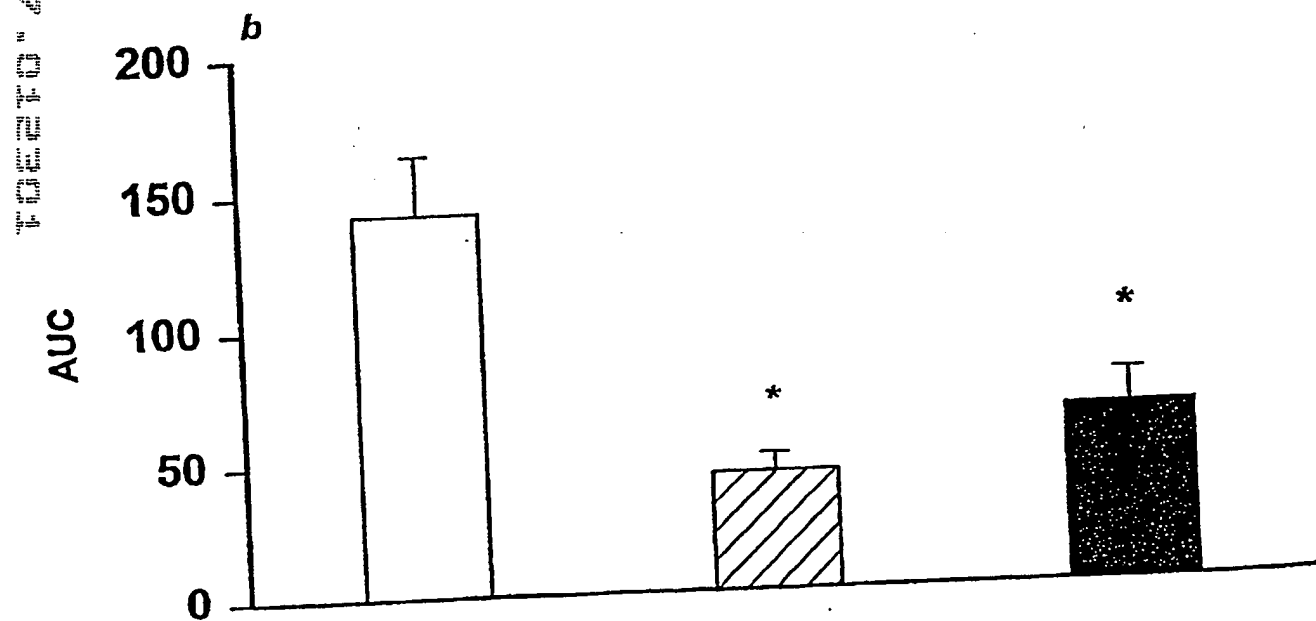
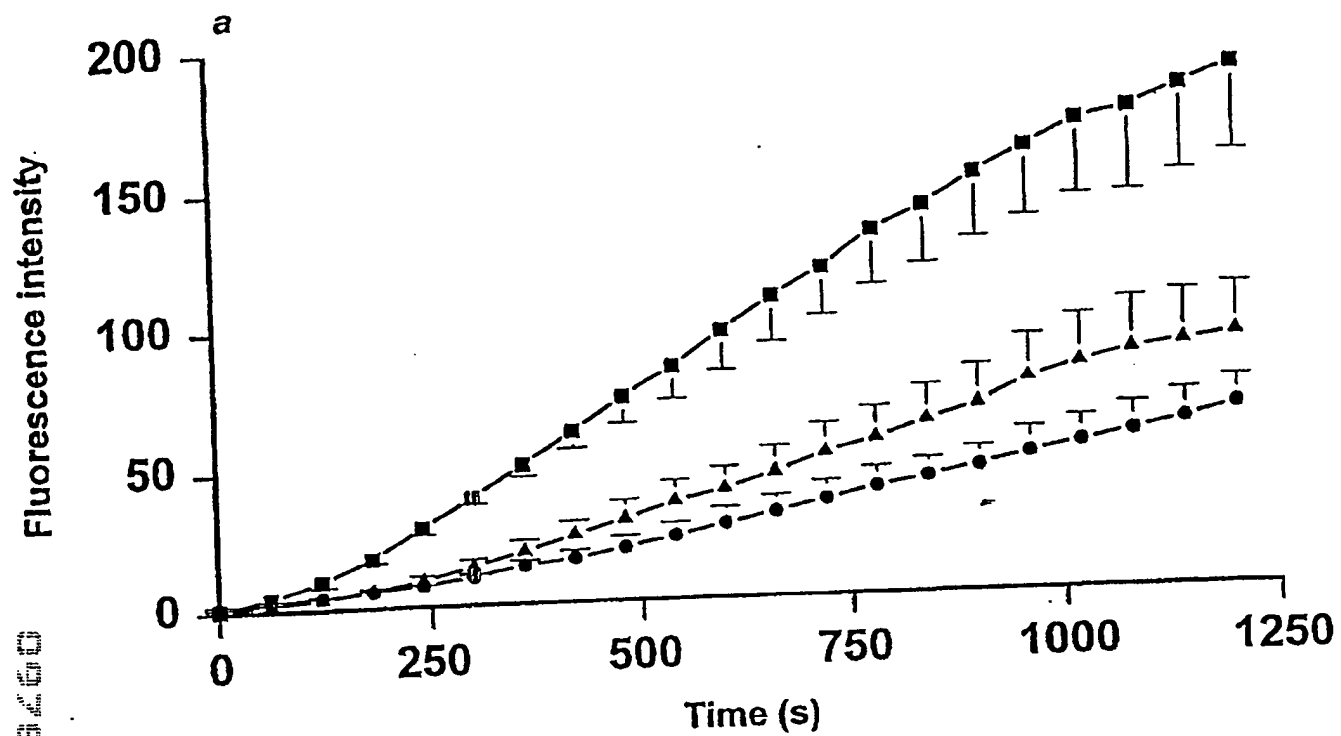


FIG. 12

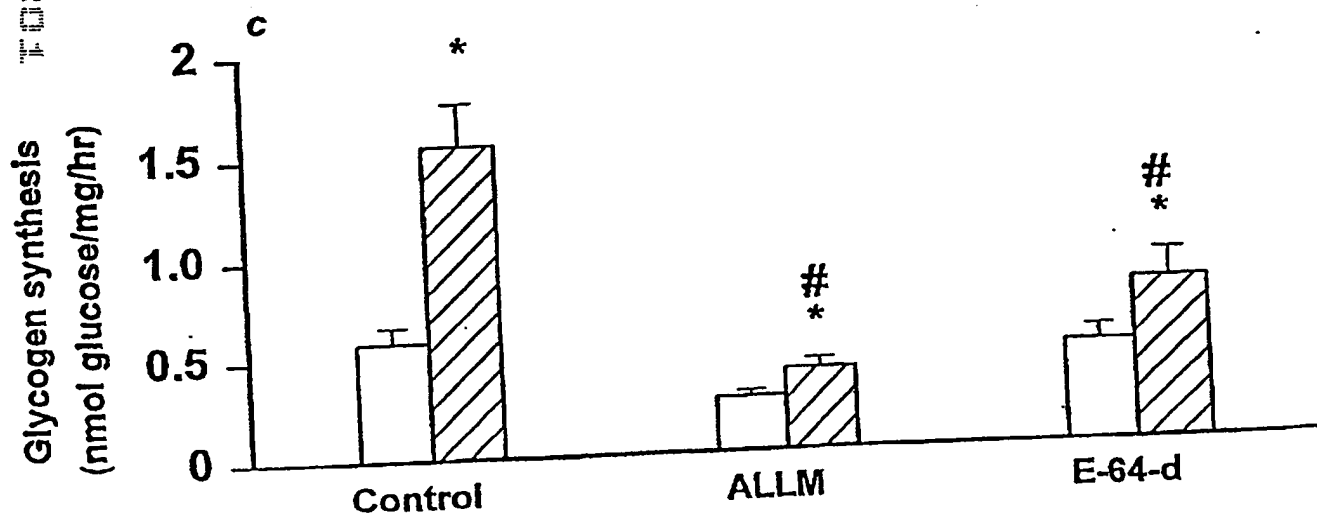
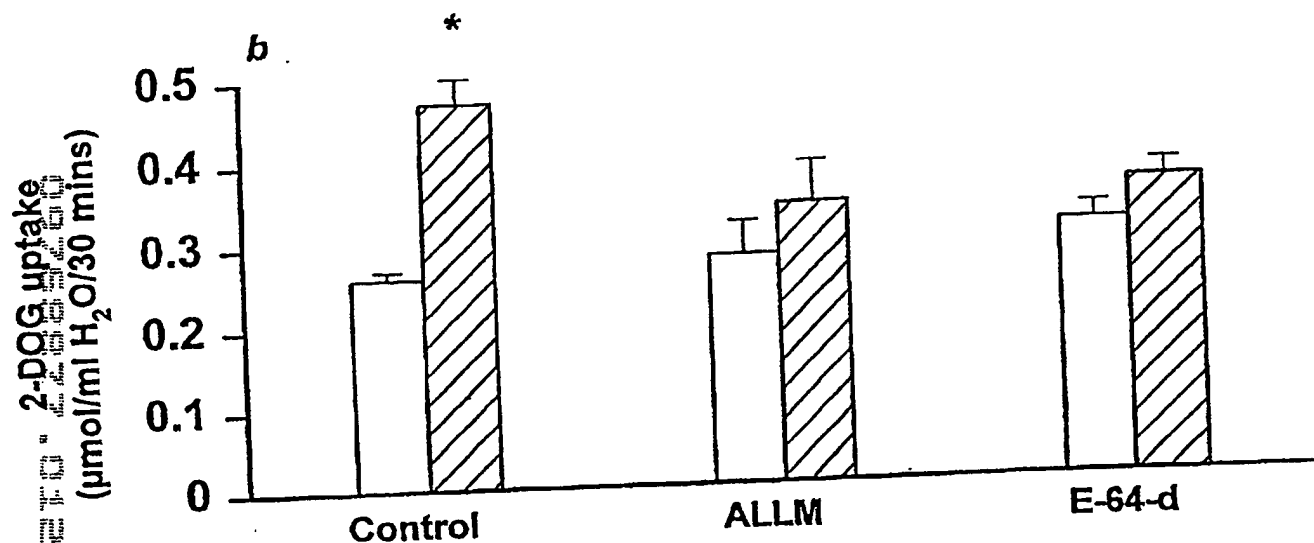
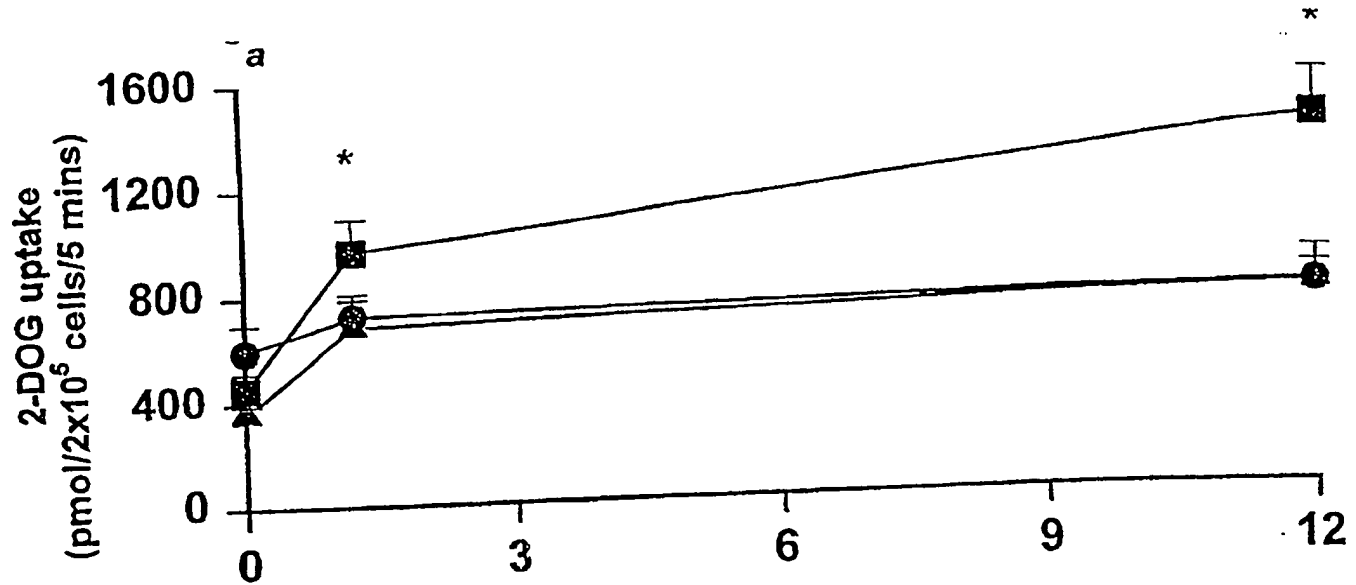
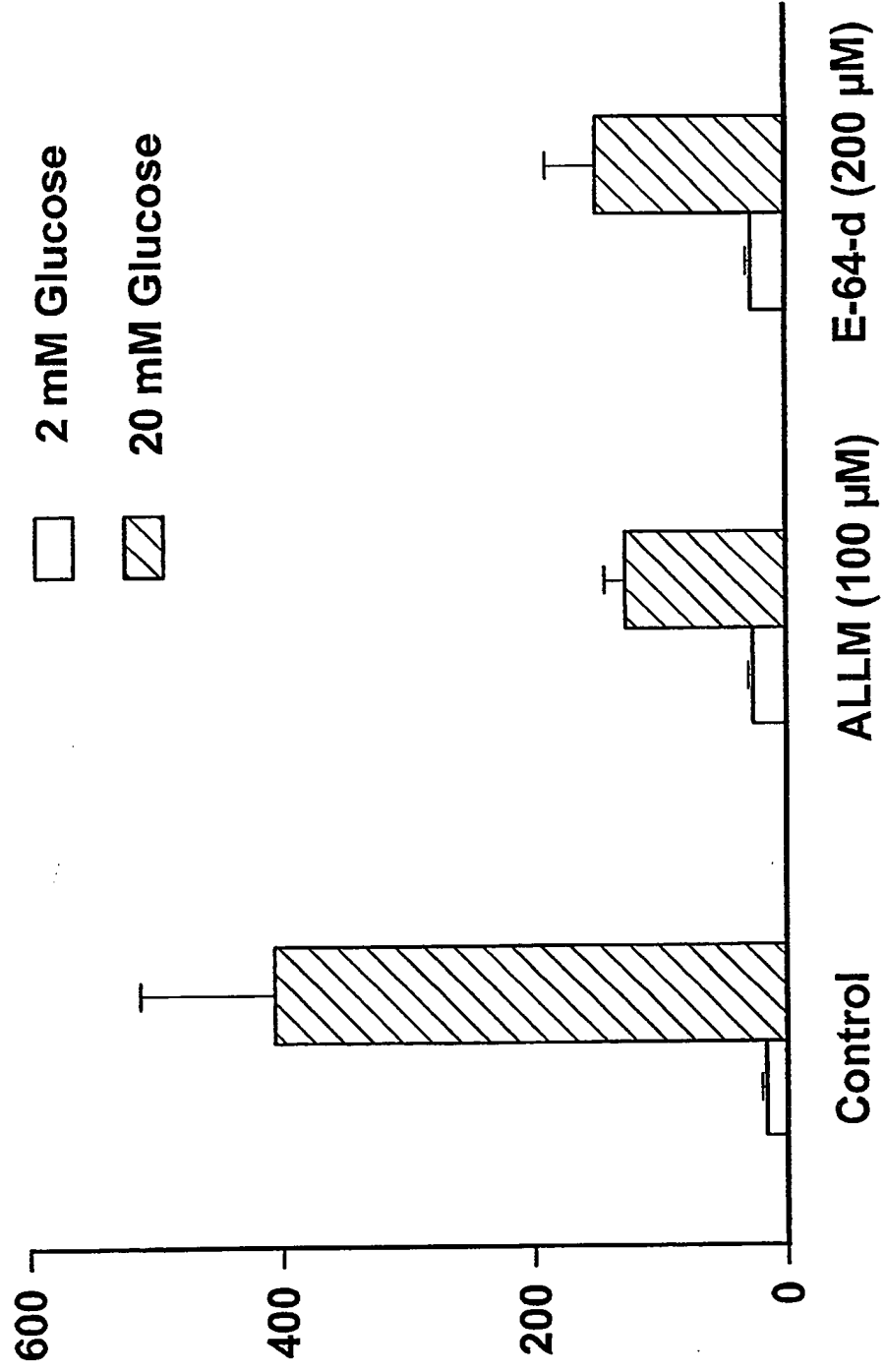
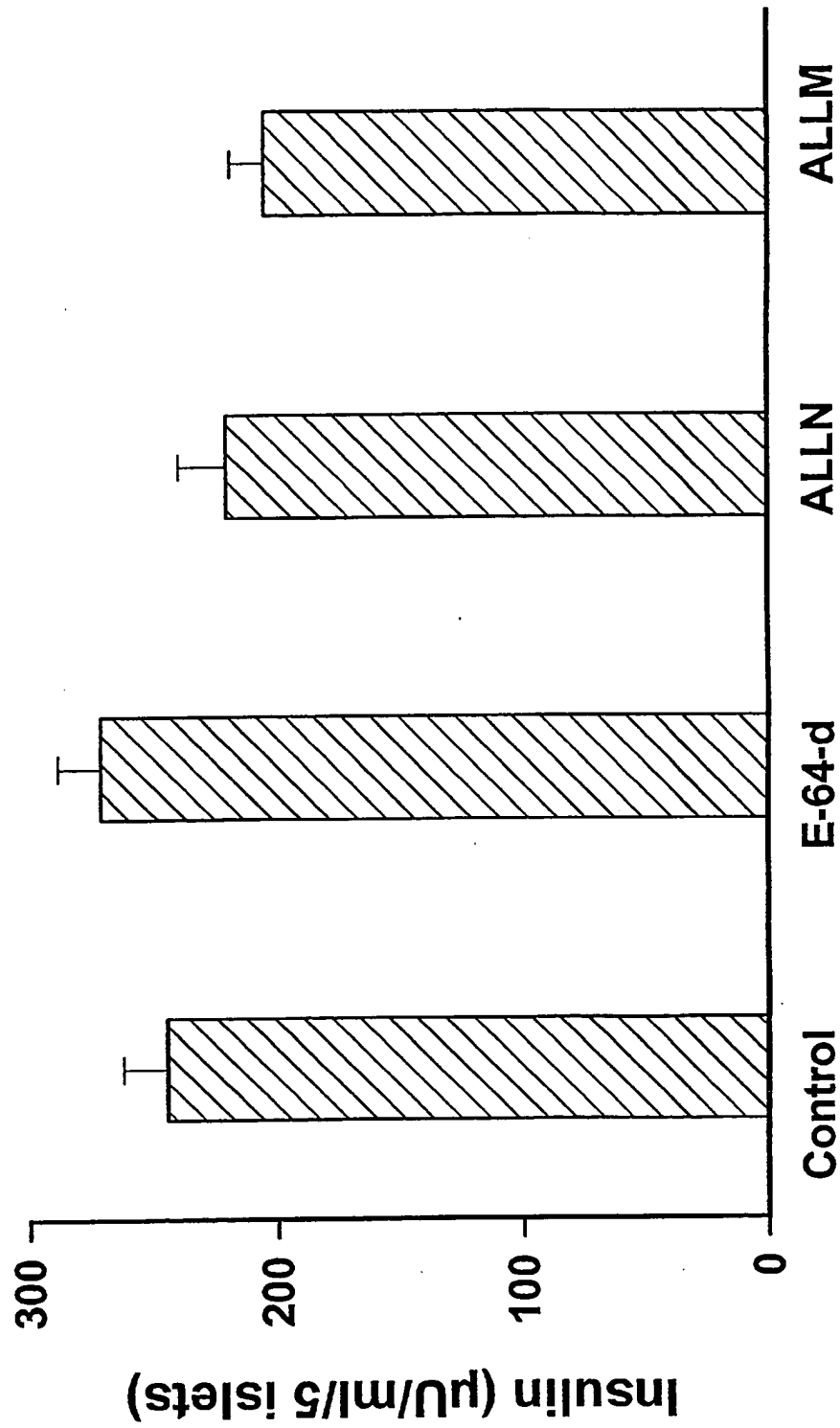


FIG. 13

**Fig14. Effect of 48 hours exposure of islets to calpain inhibitors on insulin secretion**



**Fig 15** Insulin content in 48 hour cultured islets (n=4)



**Fig16. ALLM dose response in 48 hour treated islets**

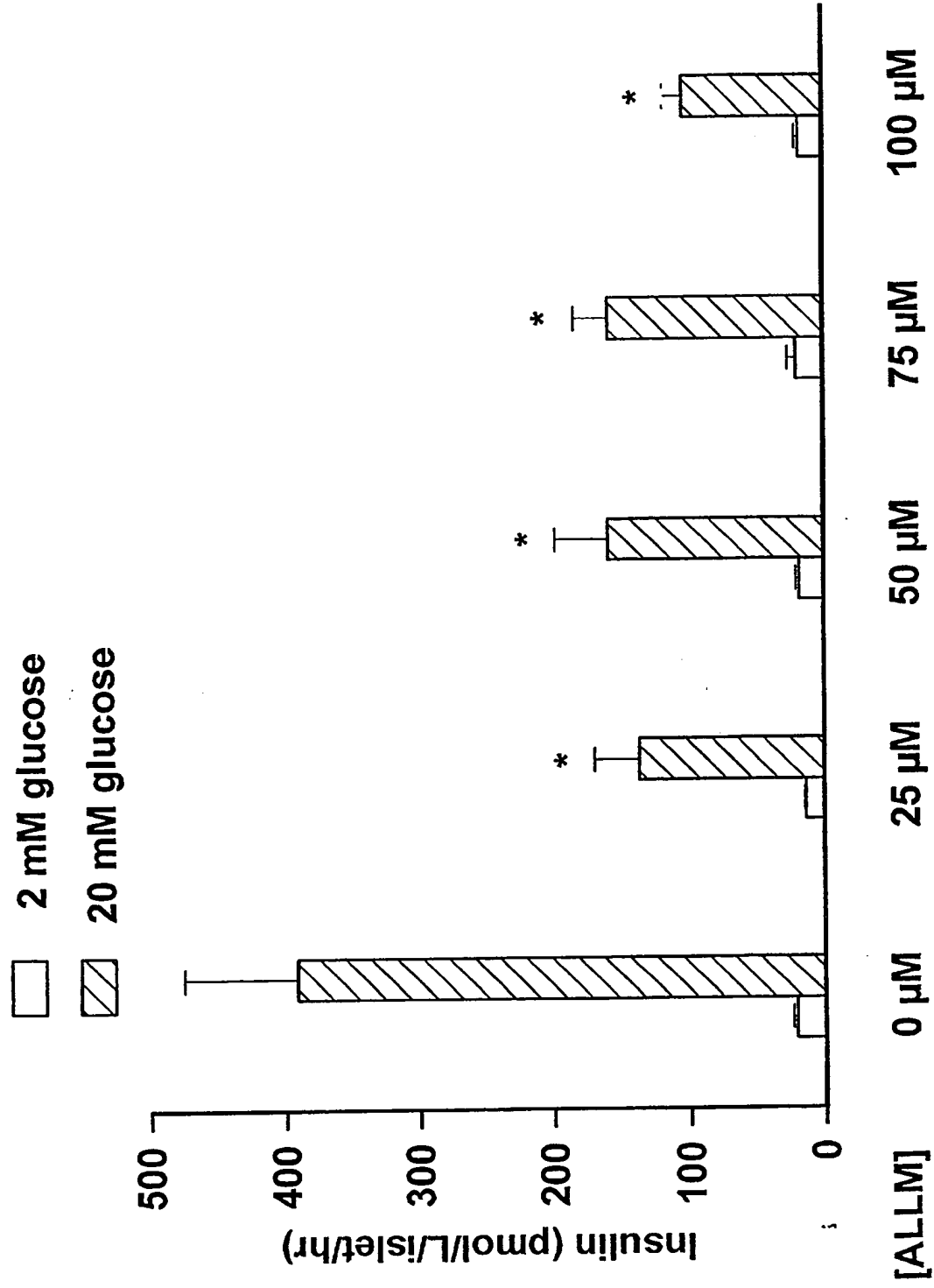
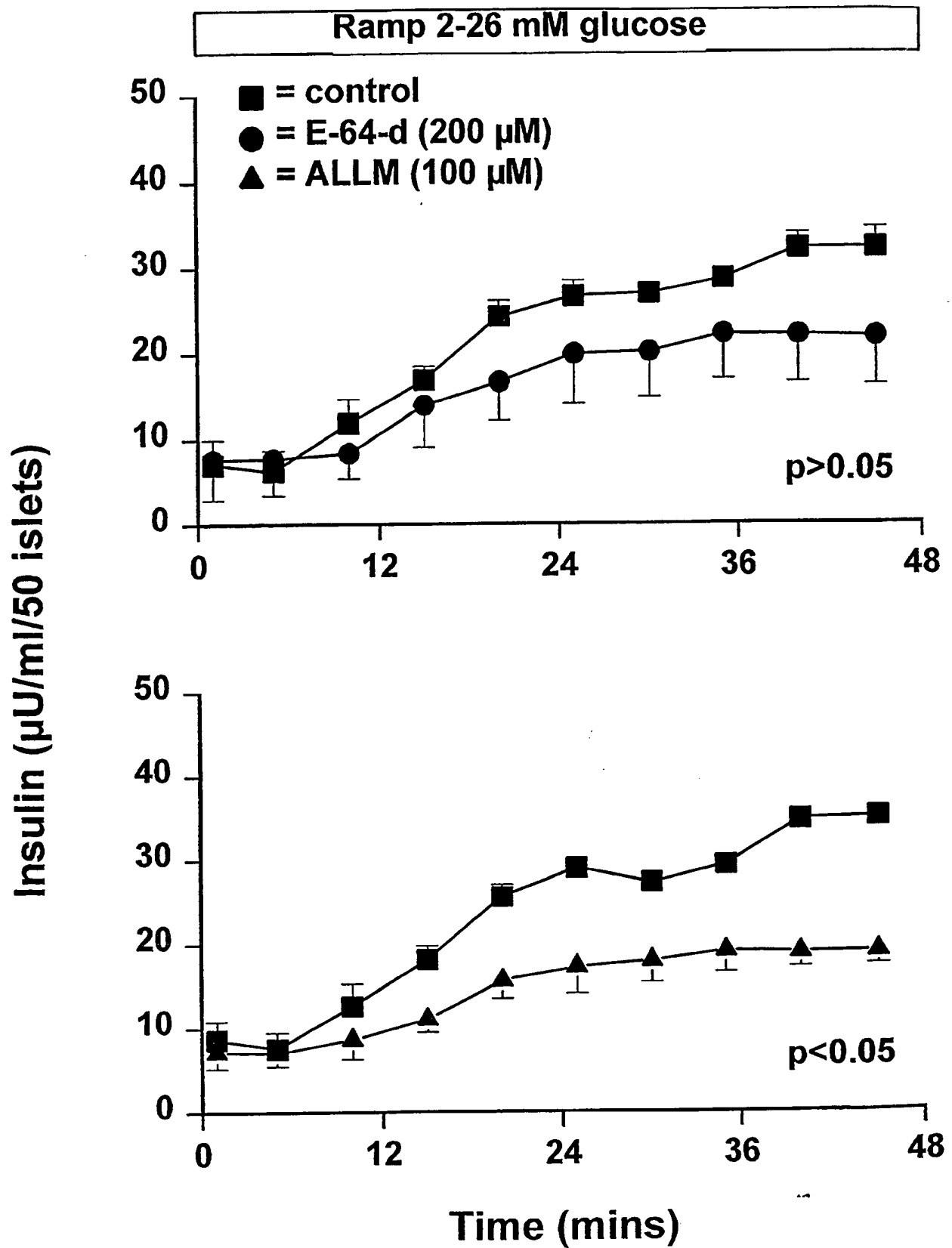




Fig 17. Perifusion of 48 hour cultured islets (n=4)



# Insulin secretion in ALLM or E64-d treated mouse islets: Reversal study

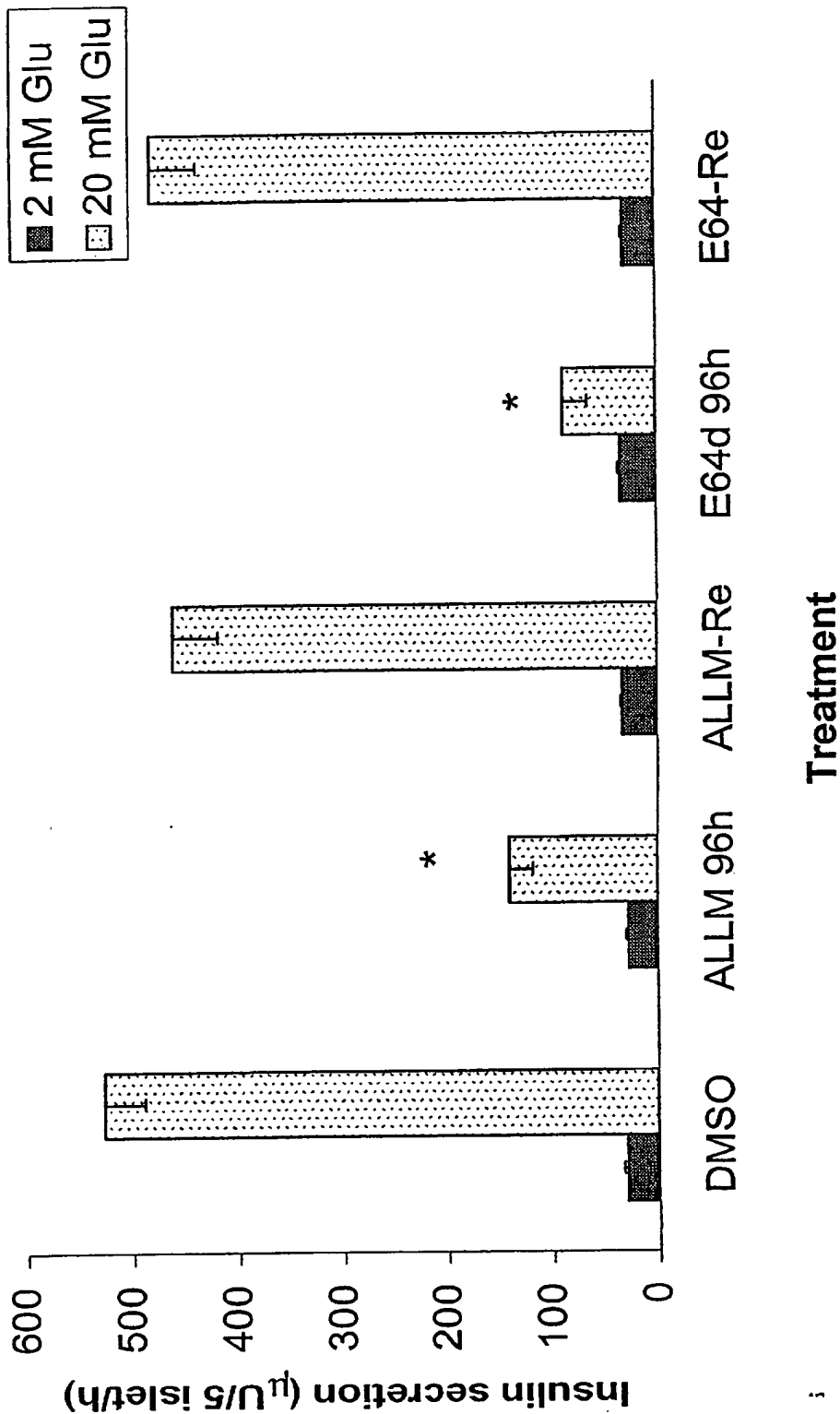


Fig. 18

Fig 19. Insulin secretion by islets following exposure to calpain inhibitors for 48 hrs

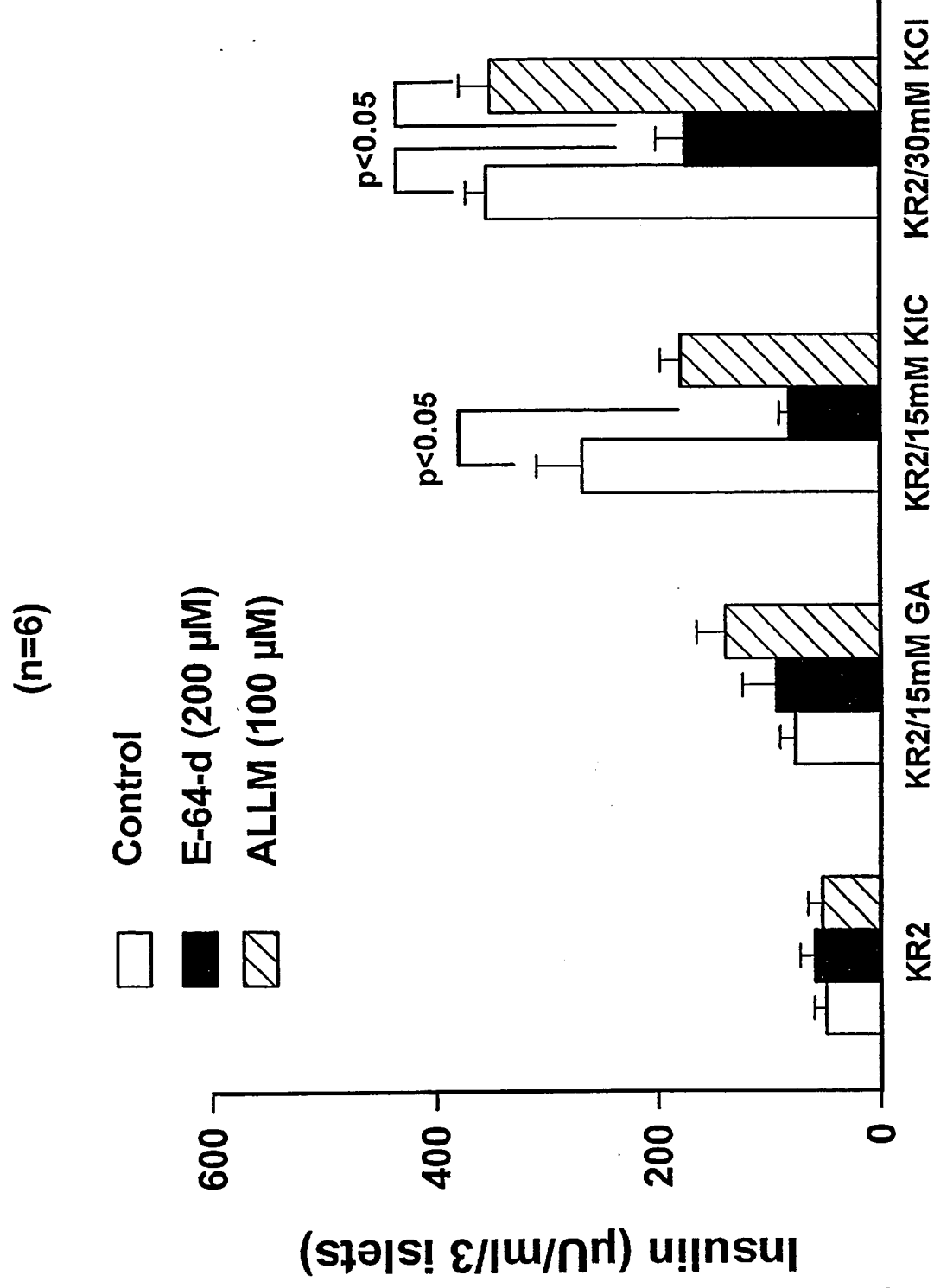


FIG. 20

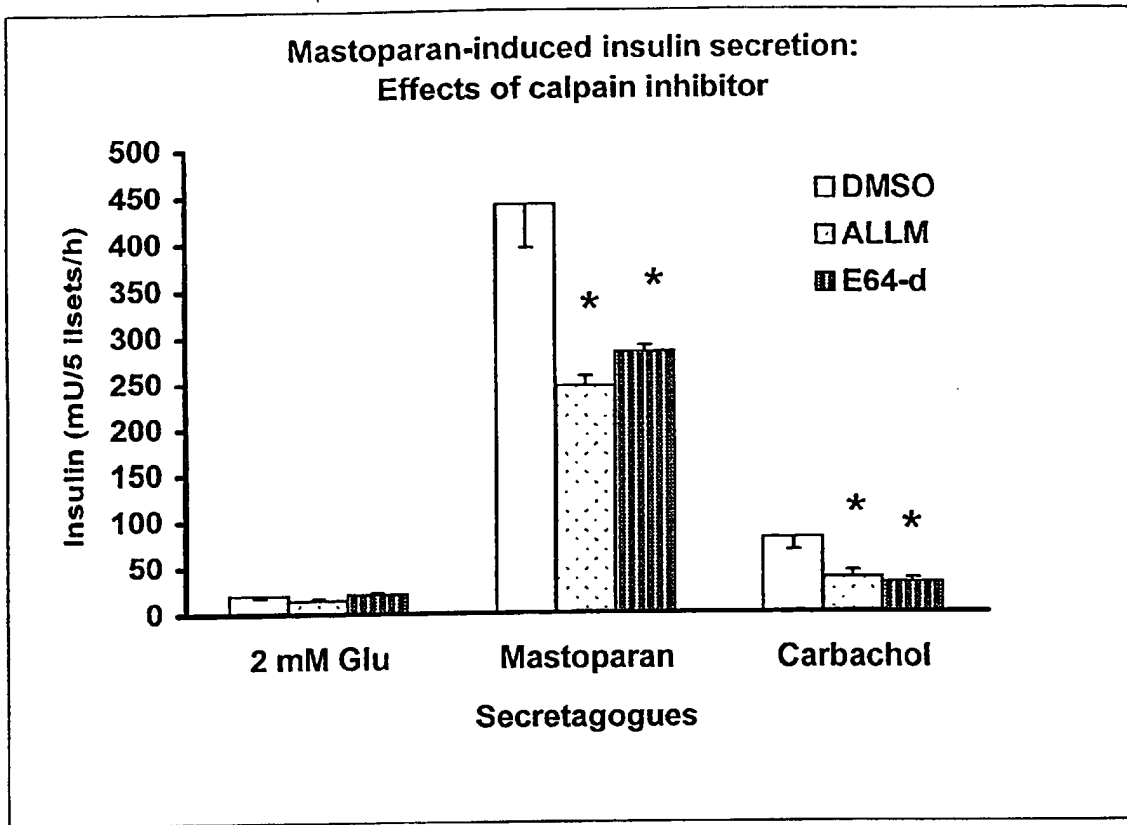
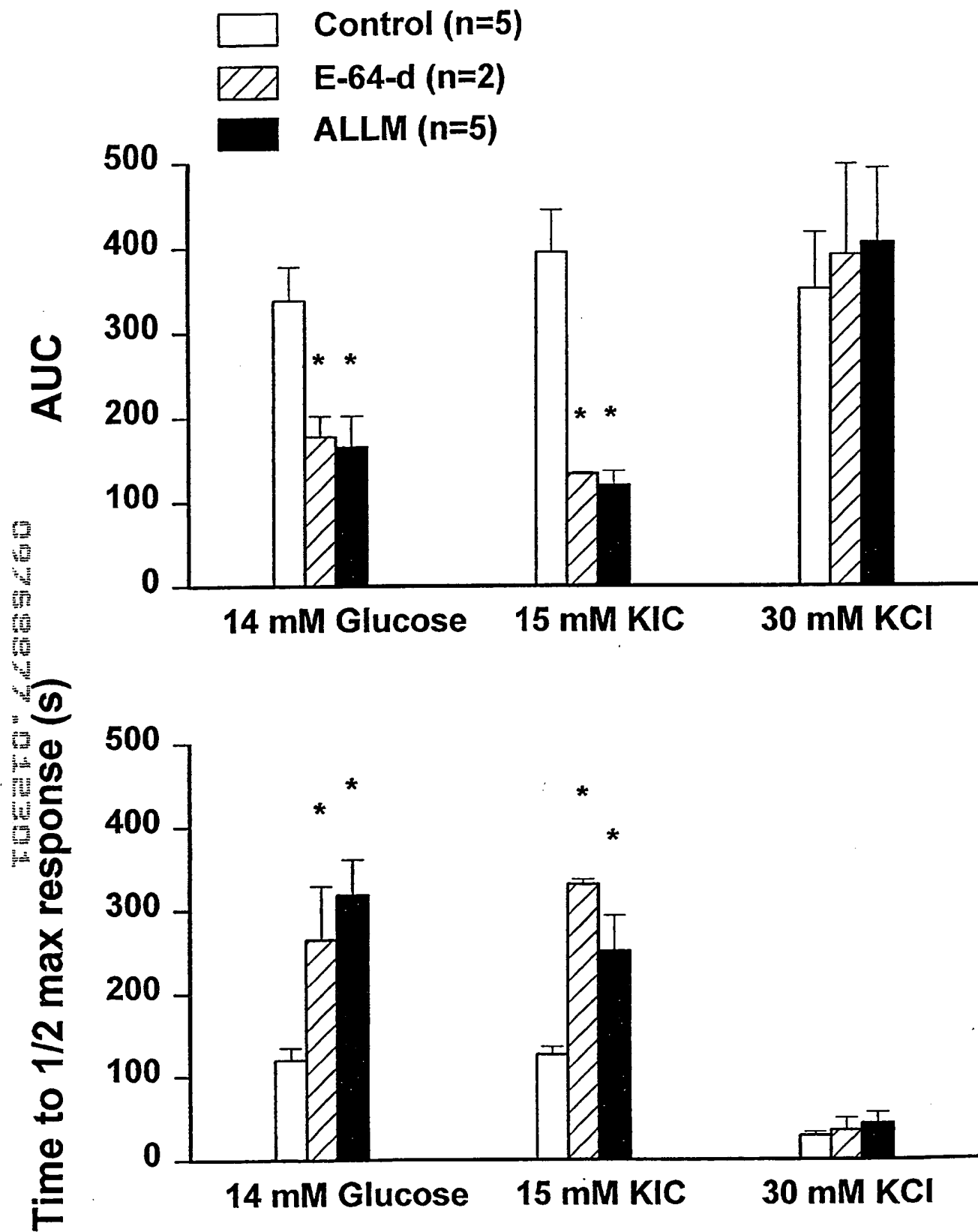


FIG. 20

Fig 21.  $[Ca^{2+}]_i$  responses to glucose, KIC and KCl



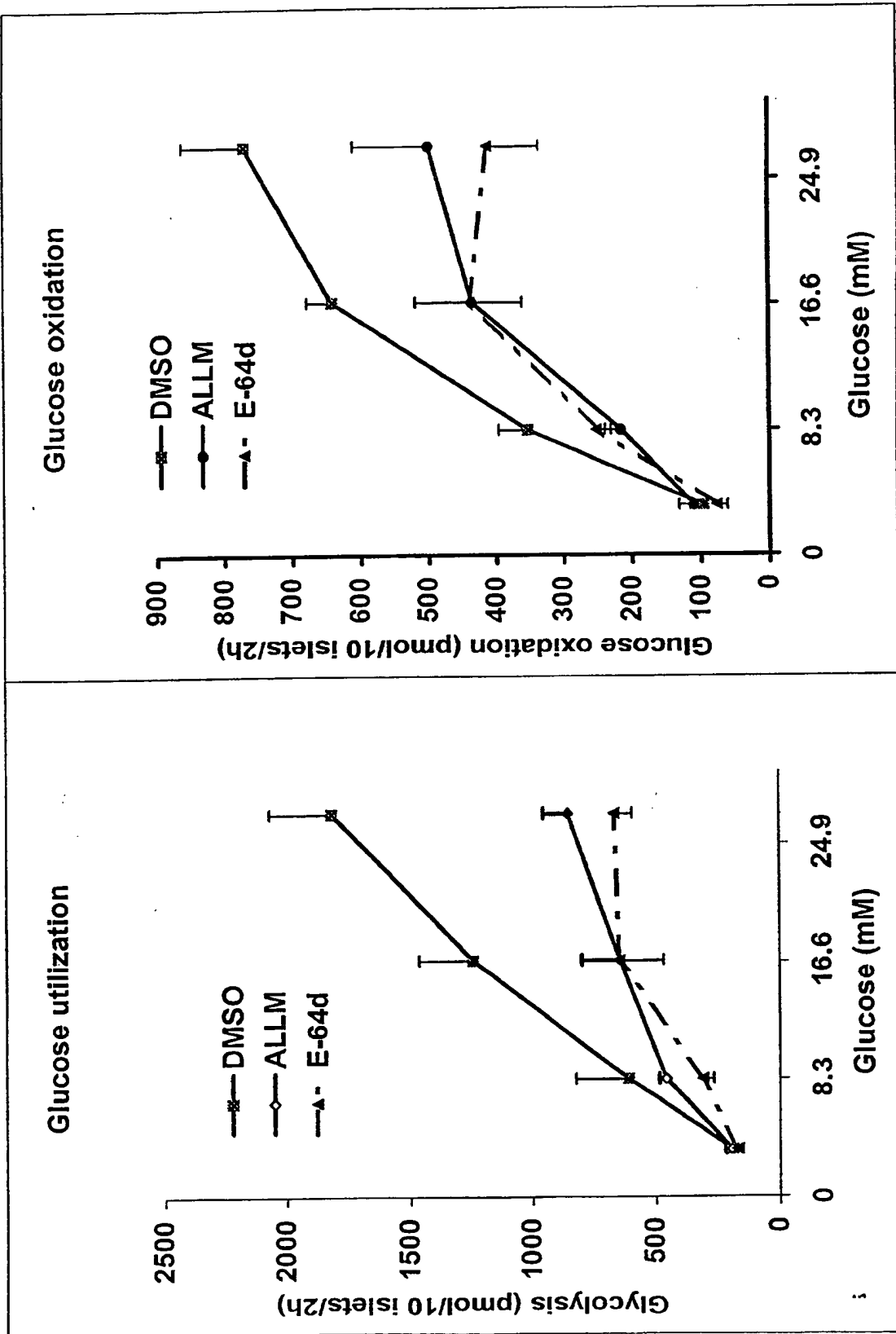
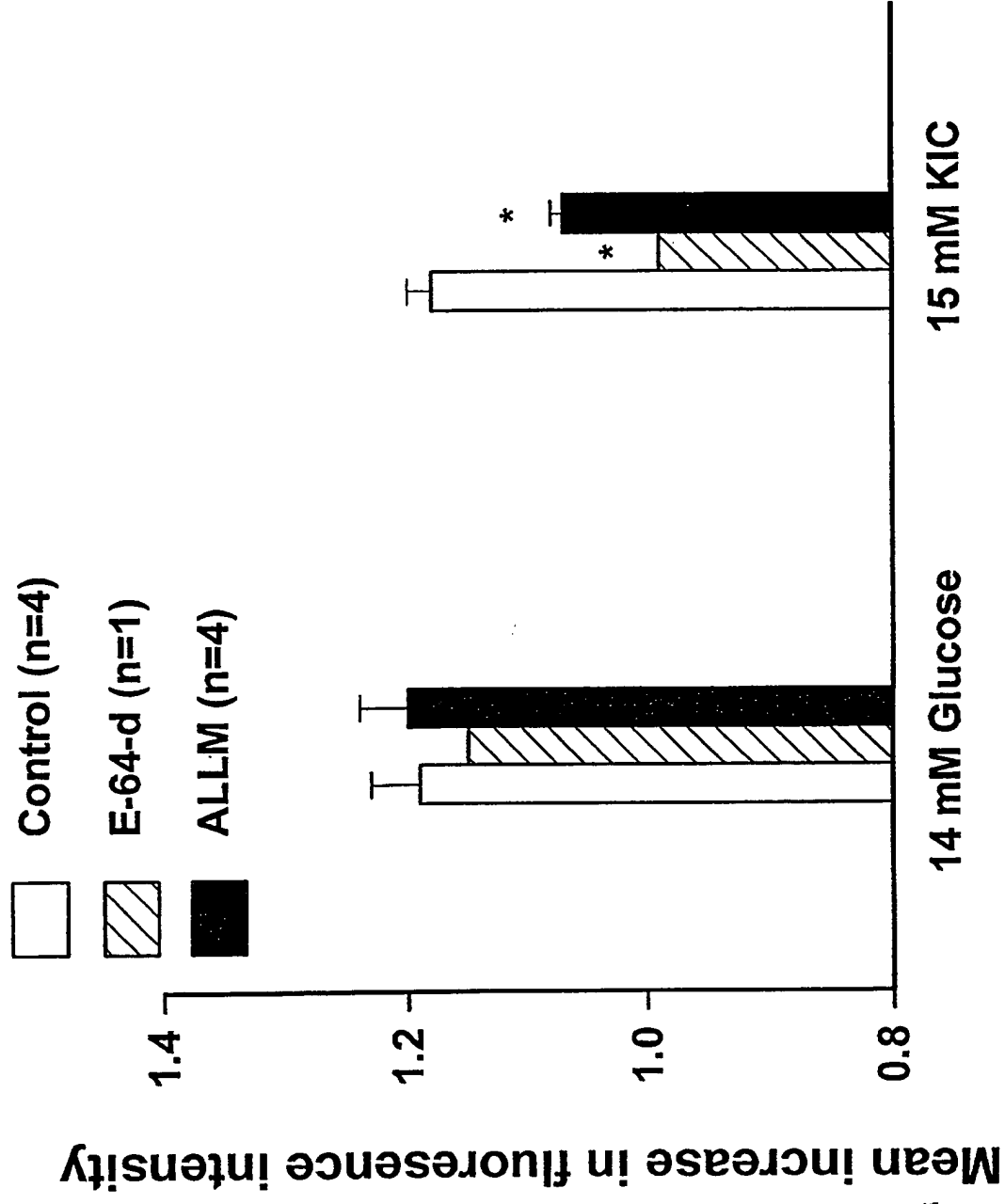


Fig. 22

**Fig 23. NAD(P)H responses to glucose and KIC**



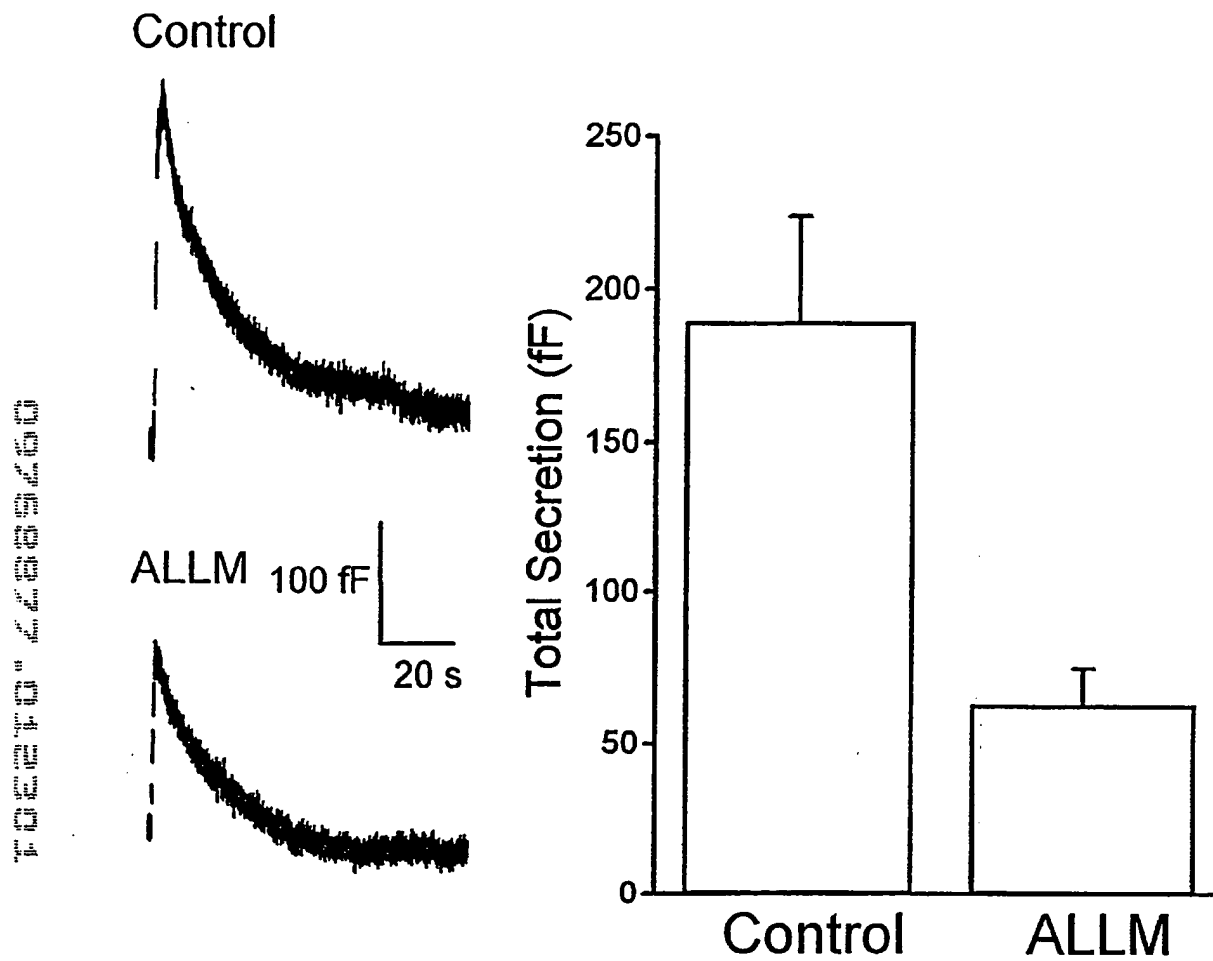
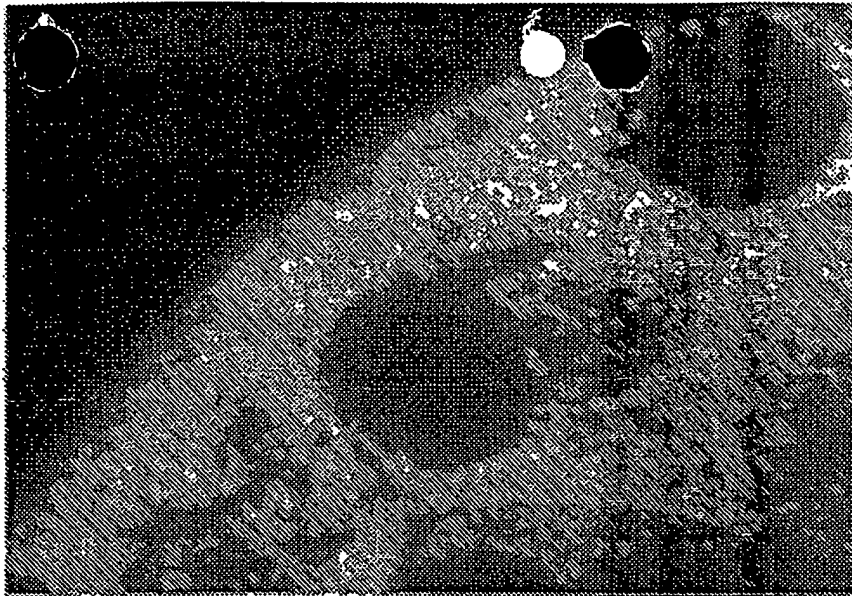


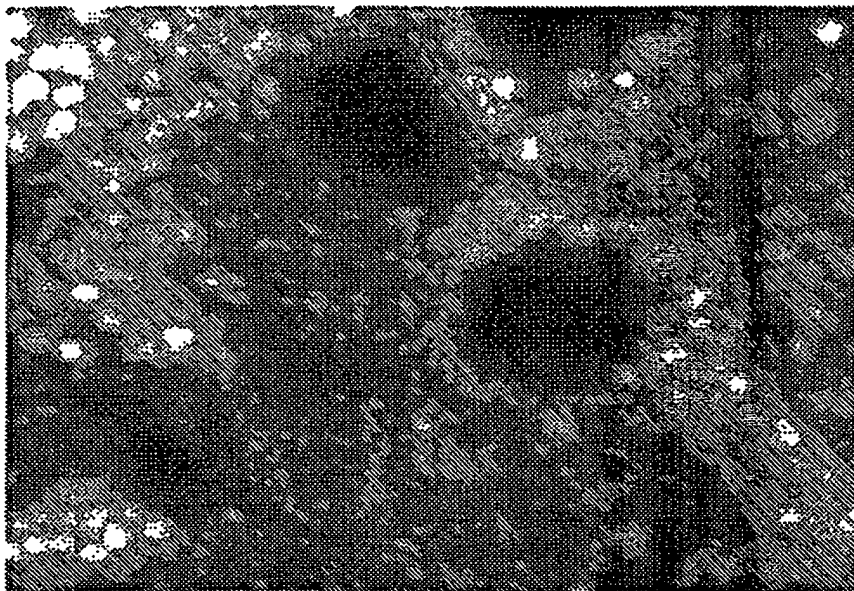
Fig. 24. Measurement of membrane capacitance in isolated  $\beta$ -cells



DMSO



E64d



ALLM

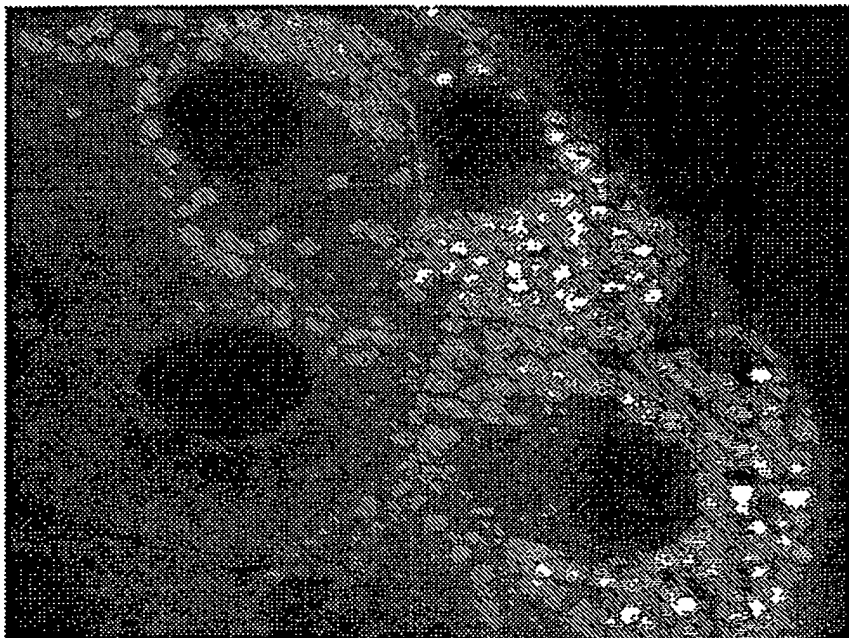


FIG. 25

09768877.012304  
"FOOT" 2289260

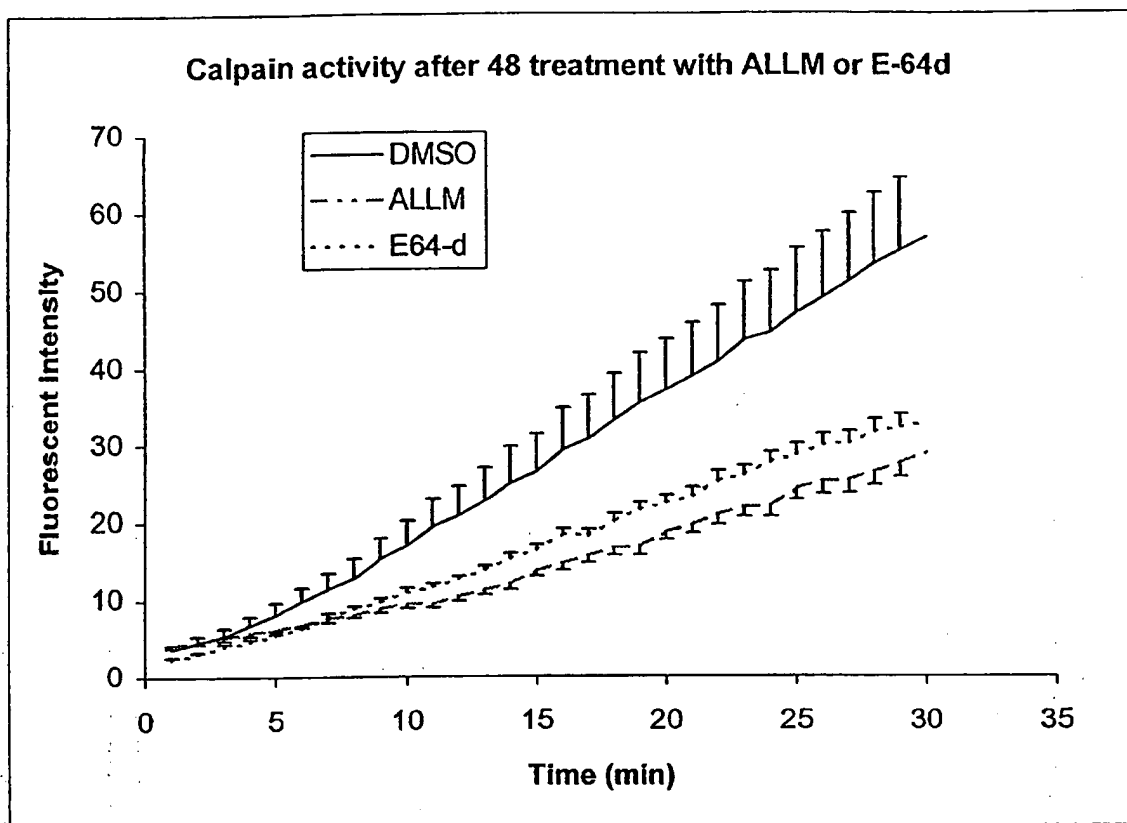


FIG. 26